BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	CG Docket No. 17-59
Advanced Methods to Target and Eliminate	)	
Unlawful Robocalls	)	FCC 17-151
	)	

COMMENTS OF NOBLE SYSTEMS CORPORATION

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EXECUTIVE SUMMARY

Noble Systems supports the Commission's efforts to address the definition of the basic mitigation services necessary for offering call blocking. Because an analytics-based technology can inadvertently block both legal and wanted calls, there is recognition that such errors, even if they occur relatively infrequently, require development of mitigation services. These mitigation services should be required if any carrier is to be able to take advantage of any safe-harbor granted by the Commission for inadvertently blocking legal and wanted calls. Noble Systems encourages the Commission to require carriers providing call blocking services to offer the following specific mitigation services:

(i) provide information of blocked calls to both callers and called parties,

(ii) provide mechanisms for both callers and called parties to inquire as to the blocking status of a number, and

(iii) provide mechanisms for both callers and called parties to request a change to the blocking status of a number.

With respect to obligating carriers to report blocking information to the Commission, the Commission should not shy away from requiring reporting mechanisms that allow the relative performance of the blocking services to be compared. However, the Commission should be cautious in imposing any complex reporting obligations on carriers and should ensure that the purpose and metrics are carefully defined.

Table of Contents

I. INTRODUCTION AND SUMMARY

Noble Systems is a provider of both premise-based and hosted contact center solutions for both inbound and outbound calling applications. As a premise-based provider, Noble Systems offers hardware and software for use by contact center operators. As a hosted contact center solution provider, Noble Systems offers essentially the same hardware and software as a hosted Communication as a Service ("CaaS") to various contact center customers in the U.S. and abroad.

Noble Systems applauds the Commission for recognizing the need for carriers to provide mitigation services to address erroneously blocked calls, as evidenced in the Further Notice of Proposed Rulemaking ("FNPRM").[1] Noble Systems is further encouraging industry participation in the definition of such mitigation mechanisms via the Communication Protection Coalition ("CPC") meetings spearheaded by PACE (Processional Association for Customer Engagement).

Noble Systems recognizes that carrier-based call blocking based on analyzing the calling party number (referred to herein as "analytics-based" technology) is being deployed by carriers to address the pernicious problem of illegal calls. Noble Systems considers such analytics-based technologies as inherently limited, as it is commonly acknowledged that this technology is not, and cannot, be 100% accurate. While a high level of confidence in identifying an illegal call is possible when blocking calls using an invalid, unallocated, or unassigned North American Numbering Plan ("NANP") numbers, attempting to identify illegal or unwanted calls that use valid, allocated, and assigned NANP numbers is inherently less certain. However, we should not let striving for perfection become the enemy of the good in eliminating illegal calls.

Noble Systems believes that a more effective long-term solution for addressing illegal calls is the deployment of the so-called Shaken and Stir ("S&S") technologies, which can augment the deficiencies inherent in the analytics-based approach. The Commission is encouraged not to tolerate any delay in deployment of S&S technologies while the deficiencies of the interim technologies are being worked out.

[1] See, specifically, paragraphs 57-59 of FCC 17-151.

II. BASIC CALL BLOCKING MITIGATION SERVICES

The scope and definition of the basic call blocking mitigation services is dependent on the perspective of the call originator (a.k.a. "calling party" or "caller") or the called party (a.k.a. as "subscriber"). These mitigation services involve:

1. providing information about a blocked call,
2. checking on the current blocking status of a number, and
3. requesting a change to the blocking status of a number.

A. Providing Information About A Blocked Call

From the call originator's perspective, it is critical to receive a per-call blocking indication that a call was blocked by the carrier.[2] All carriers must provide some call treatment to the call originator, and these typically include indications reflecting: busy, no-answer (ringing), answer (including the call being answered by a voice mail service), or network-provided intercept (an audio announcement played to the caller). Presently, some carriers return a "user busy signal" when blocking a call. This condition may cause adverse interactions with originating voice networks or call originators. A call originator may subscribe to a carrier service such as "call completion to busy subscriber" ("CCBS") or their equipment may perform an automatic redial function when a busy is encountered. The latter is commonly used by contact centers that automatically schedule a reattempt to a number when encountering a busy indication. Both of these features cause subsequent re-attempts to that number (whether immediately or after a defined time period). The reattempted call may encounter another busy condition and the cycle repeats. This merely increases call volumes and wastes network resources.

Further, providing a misleading indication to the caller in the form of a busy signal to the call originator is inconsistent with the Commission's prior directives. When addressing issues related to rural call completion, the Commission stated that "it is a deceptive or misleading practice…to inform a caller that a number is not reachable or is out of service when the number is,

[2] The per-call blocking indication is recommended to be provided by terminating carriers blocking calls using analytics-based technologies. Provision of this indication would not be necessary by transit or originating carriers to when blocking calls based on detecting invalid, unassigned, or unallocated numbers. In such cases, the calls are presumed to be illegal and no blocking indication would be required.

in fact, reachable and in service."[3] Based on the same principle, it is deceptive and misleading to inform the caller that a number is busy, when in fact, it is not and the carrier has instead blocked the call. It should be uncontroversial that the blocking carrier should not provide deceptive or misleading information to the call originator.

Further, economic or other harm may accrue to both the call originator or to the called party by providing such misleading information. The call originator is not aware that future attempts to reach the caller may be futile, and the call originator does not know to take alternative measures to contact the called party if circumstances dictate. Any number of scenarios can be identified that may be impacted, from emergency alerts, bank fraud notifications, package delivery notifications, funds transfer notifications, and medical appointment reminders. The called party is likely unaware that a potentially wanted call has been blocked. If the call originator were informed that their call was blocked, then they could pursue the mitigation services proposed herein to correct what may be an error by the blocking carrier, thereby preventing further harm.

Some argue that the policy should be that call originators should *not* be informed on a per-call basis that their call was blocked. The logic is that scammers will then stop using that calling party number and will react by selecting a different calling party number. This argument is deficient for several reasons. First, it is based on a false premise that informing the scammer their call was blocked provides valuable information to the scammer they would otherwise not know about. The fact is that scammers making a large volume of illegal calls already can detect in a short time (hours or days) if their calls are blocked.[4] This is done by monitoring a change in the answer or busy rates.

There is empirical proof that scammers are changing their calling party numbers. Scammers used to frequently use invalid or unassigned numbers, but these are now readily identified and blocked. Hence, scammers adapted by using valid, assigned numbers for all their calls. This adaption is no longer effective so scammers have now migrated to "neighbor spoofing." "Neighbor spoofing" was reported to have increased 1500% in 2017.[5] Thus, scammers know that analytics-based call blocking is working (to an extent) and they have adapted. So, scammers (and

[3] FCC DA12-154, par. 13.
[4] Some hosted call center providers already "rotate" usage of the calling party number during a calling campaign after it is determined that the number may be blocked. This may be triggered by monitoring the busy rates.
[5] https://hiya.com/blog/2017/07/10/neighbor-scam-surges/.

even legitimate call originators) can eventually detect if their calls are being blocked and "rotate" the usage of the calling party number from a pool of numbers.

However, legitimate call originators cannot easily detect call blocking on a per-call basis. A legitimate call originator may make a small number of calls per day (e.g., a doctor's office making a few dozen patient appointment reminders) and may not readily detect if any of their calls are being blocked, because of the low call volume or for a lack of sophistication in their equipment or operations. However, a scammer originating thousands of calls per day can readily detect this condition, and experience has shown scammers have responded by migrating to neighbor spoofing. Scammers do not care if some calls did not reach their destination, unlike other situations involving legitimate call originators where each call is vitally important. Consequently, the absence of a per-call blocking indication harms both legitimate call originators and called parties, but has little impact on scammers making calls.

Further, as reported by analytics companies, a scammer can easily determine whether their calls to wireless numbers are being blocked by a wireless carrier by simply procuring wireless smartphones from each of the four main wireless carriers and subscribing to the carrier's blocking service. The scammer can then periodically originate test calls to those smartphones to determine if their called are being blocked. However, it is unreasonable to expect a legitimate call originator (e.g., a doctor's office making appointment reminder calls) should be required to procure such wireless phones and make such periodic test calls.

Thus, from a policy perspective, the Commission should require terminating carriers using analytics-based blocking technology to provide a per-call blocking indication to the call originator. This could be provided by an audio intercept message and/or a uniquely defined signaling cause code. A human is be able to readily interpret the audio intercept message and a computer is able to readily interpret the signaling cause code.

If an intercept is provided indicating the call is blocked, then further issues arise if an inconsistent signaling cause code is returned. First, contact centers typically do not employ speech analytics equipment to analyze intercept announcements and agents are not always on the call monitoring such intercept messages. Rather, computerized equipment interprets the signaling cause codes or disposition codes entered by an agent. The signaling cause code may then indicate a condition to the computerized dialing equipment (such as "busy condition") that is inconsistent

with the message conveyed to a human via the intercept (that the call was blocked). Even if the agent does hear the intercept message, there still is a discrepancy of the status as interpreted by the agent and the status interpreted by the computerized equipment.[6]

This brings the analysis back full circle to the previously stated Commission principle that "it is deceptive and misleading to inform the caller that a number is busy when in fact, it is not and the carrier has blocked the call." In other words, if an audio intercept is provided, carriers should indicate a consistent signaling cause code to the call originator. Carriers may object because this places an obligation on them, but the solution is technically feasible and not an undue burden. The provision of the intercept message is a readily feasible short term solution and the Commission can define a corresponding time period to phase in the use of a consistent signaling cause code to ensure consistent information is provided to the call originator.

The situation of informing the called party of a blocked call is slightly different. Because the call is blocked, the called party is unaware of the call. Thus, the called party is not informed in real-time when a call is blocked. It is not readily clear that it is necessary that the called party be provided a real-time notification, such as receiving a SMS message (if the called number is wireless). However, called parties should have a mechanism allowing them to review which past calls were blocked. Solutions included offering a website by the service provider that the called party could access to review which calls were blocked (potentially along with other information, such as which one were not blocked).

As is evident, the called party and the call originator must be afforded the capability to ascertain and verify that certain calls are/were blocked. Without the capability of informing users of which calls are blocked, it reduces the usefulness of mechanisms to correct such errors. At a worse case, call originators will be checking the status of all their numbers every day, and will be flooding carriers and analytics providers with voluminous and unnecessary inquiries. This simply is an unworkable solution.

[6] Noble Systems has observed, in other contexts (outside of call blocking), that calls may be terminated by a service provider with an audio intercept indicating one condition (such as the number is disconnected) and the signaling cause code indicating another (such as busy) or vice versa. Other inconsistent combinations have been observed, leading to uncertainty as to what is the actual disposition of the number.

B. Checking On The Current Blocking Status Of A Number

The status returned by a carrier in response to a blocking status request is time-dependent. The blocking status of a number may change hourly or daily. For example, a blocking status may be set in response to detecting scam calls using a spoofed number. Scammers know that using the same spoofed calling party number too long will result in that number being tagged for blocking or labeling. Hence, scammers have now migrated to using neighbor spoofing, where the spoofed number is used for a shorter time period and only for certain calls (e.g., associated with a specific area code/central office code). In response, the analytic algorithms must react faster by updating or modifying the number's status. Consequently, it is quite possible that the status of a number may change after providing a response to a status request.

From the called party's perspective, they must be able to check on the blocking status of a telephone number. This could be provided in conjunction with the above-mentioned website informing the called party which calls were recently blocked. A called party may use the website to enter a particular telephone number, and review the current blocking status in real-time. It is quite possible that the blocking status of a given calling telephone number may be different for different subscribers of the same carrier.[7]

From the call originator's perspective, they too should be provided with a mechanism to check the status of one or more telephone numbers. It is expected that some call originators may request checking dozens numbers at a time by submitting a list or file using an automated interface, as opposed to manual entry on a number-by-number basis. In this case, a response should be provided within one business day. Thus, the mechanism to check the status of a number offered to call originators may be different than what is provided for called parties.

In addition, call originators submitting a list may be first required to register to be vetted in order to receive login credentials from that service provider. This is to avoid scammers from being able to check the status of numbers on a wholesale basis. Further, call originators may be required to represent that they are authorized to originate calls on the numbers they indicate. Thus, call originators can only check the status on numbers they are authorized to use.

[7] For example, Called Party X may request to block a telephone number, but Called Party Y requests to receive it. Thus, when each called party checks on the blocking status of that telephone number, it may be different.

This arrangement has the disadvantage that a call originator may have to check with a number of carriers in order to obtain a comprehensive picture of the status of a number. In the future, it may be desirable to designate a central clearinghouse provider that would receive a request, forward copies of the request among the various carriers, collect the various responses, and provide a single response to the call originator. However, while this is a laudatory goal, it should not delay the Commission from mandating each carrier provide this capability.

C. Requesting Changing The Blocking Status Of A Telephone Number

From the called party's perspective, each subscriber should be offered a mitigation service allowing them to alter the blocking status of a particular telephone number. Barring unusual circumstances, a carrier should act upon this request in real-time, as it originates from their subscriber.[8]

From the call originator's perspective, they may also request altering the blocking status of a number from which they are authorized to originate calls, but the carrier is not obligated to alter the blocking status. Such requests may require prior registration of the call originator with the carrier, along with an assurance that the call originator is authorized to originate calls using that number. Once registration has been completed, the carrier should be able to respond to a request from an identified call originator in real-time. The carrier should review the request, but the result may be that the number's status remains unchanged. For example, if the subscriber has explicitly requested that calls from that number should be blocked, then the carrier will not likely act upon a request from a call originator to unblock that number. Clearly, it would not be desirable to allow a call originator to override a subscriber's explicit request.

If the call originator disputes the action (or inaction) taken by the carrier, then the call originator may elect to contact the called party (who may have a business relationship with the call originator) to persuade the called party to request the carrier to unblock calls from that number. Or, the call originator may elect to pursue a complaint with the Commission, if the decision to block that number appears arbitrary.

[8] Many carriers already offer a service allowing customers to selectively reject a call based on the calling party number, as well as removing that number from a rejection list.

Finally, any granting of a safe harbor must be predicated on the carrier providing the aforementioned mitigation services. Without mandating such mitigation services, aggressive over-blocking by a carrier becomes difficult to detect and correct.

III. ADDRESSING SPECIFIC QUESTIONS POSED IN THE FNPRM

To the extent that the above does not address specific questions raised in paragraphs 57-59 of the FNPRM, the following is offered.

> A. *Should challenge mechanisms be different based on the scale of the blocking provider? What challenge mechanisms are blocking providers considering adopting, even absent a requirement? Is such a requirement necessary*?

The "challenge" mechanism is more accurately described as either a method of inquiry as to calls blocked or the blocking status of a number. A subscriber (called party) may inquire as to what calls have been blocked. A call originator may inquire as to the blocking status of one or more numbers. The "scale" aspect is not so much based on the size of the blocking provider (i.e., size of the carrier), but should be based on the quantity of numbers being inquired of. A website with manual entry may be fine for checking on the status of one number, but unsuitable for checking one hundred numbers.

Specifically, a called party (subscriber) making an inquiry as to what calls are blocked may utilize one mechanism (a website) whereas a call originator (e.g., a contact center) making inquiries for the status of a set of numbers may utilize another mechanism (an interface for transferring a file). Further, the subscriber may be presented with subscriber-proprietary information about their other calls (potentially including information of non-blocked calls), but obviously such information would not be provided to a call originator. In summary, it is necessary to offer a mechanism for called parties to review which calls have been blocked and a mechanism for call originators as to which numbers are presently tagged as being blocked.

B. Alternatively, does our informal complaint process provide a mechanism to surface erroneous blocking to providers and correct it? Are there ways we could modify our informal complaint process to address the time-sensitive nature of erroneous call blocking? Are there other Commission processes that would provide an appropriate mechanism for rectifying erroneous blocking?

A complaint process offered by the Commission is likely to be necessary. However, a mechanism to resolve disputes with the service provider should be used first. It is necessary that each service provider that offers call blocking also provide a mechanism to:

1) inquire as to the present status of a number, and

2) request correction or altering of the status.

For a subscriber (called party), the request should result in a change of the status. It seems subscriber complaints to the Commission on this point would be relatively rare. For a call originator, a request for a correction does not necessarily mean that the status will be changed by the service provider. Disputes to the Commission are likely to arise when a call originator's request to alter the blocking status is denied. Continuing disputes, or a high number of disputes, may be noted by the Commission, as this is likely to be probative of a poorly managed blocking service by a carrier.

C. Once a caller is aware of erroneous blocking, how can we best ensure their calls are unblocked?

The caller does not control whether their calls will be blocked or not; they can only make a request to a carrier to alter the current status of the number. However, if a request to alter the status is made and the carrier determines an error in classification occurred, any correction should be done by the carrier on a timely basis. A maximum time frame for acting on a request should be defined, which should not be more than one business day. This presumes that the caller has registered with the carrier and declares they have the authority to originate calls using that number. Thus, no further 'vetting' of the call originator should be required. If the call originator has not registered, then a maximum of three business days should be allowed for this process.

It should be noted that the call originator making the request may not be assigned the number by the carrier allocated the number, but the call originator may be authorized to use that number by the entity who is assigned the number.

D. Should providers cease blocking calls as soon as is practicable upon a credible claim by the caller that its calls are being blocked in error?

The scope of what constitutes a "credible claim" is key to this answer. "Acting upon a request" to alter the blocking status of a number means receiving the request, evaluating the facts, and making any change as a result of the evaluation, and responding to the call originator. Ideally, after it is discovered an error is made, any correction should occur as soon as possible. The entire process should be completed within a target time period, e.g., one business day.

It is desirable for the carrier to offer an automated interface to receive such requests. However, it is expected that call originators would have to identify themselves first to the carrier via a registration process, to ensure that they are authorized to make the request. This may require registration of the call originator, communication of credentials (user ID and password) over the automated interface, etc. Otherwise, scammers may simply anonymously request unblocking of a number.

E. Should we establish specific timeframes and requirements for making a credible claim of erroneous blocking?

A call originator can make a claim of erroneous blocking at any time, regardless of when the number was first identified for blocking by the carrier or when the call originator was first informed or aware of blocking. This claim would be manifested to the carrier by making a request to alter the status of a number. There should not be any timeframe required for a call originator to make the request after discovering what is believed to be erroneous blocking.

F. How can we mitigate the risk that makers of illegal robocalls will exploit such a process? Commenters should address the balance between quickly identifying and rectifying erroneous blocking against imposing unduly onerous burdens on providers that might disincent helpful call blocking.

Any analytics-based scheme essentially allows some level of exploitation by bad actors. That is, for each number that is correctly listed as being "unblocked," a scammer could spoof that number and make illegal calls, possibly resulting in that number being blocked. If unblocking that number results in "whitelisting" that number, then scammers will revert to using that number.

There is legitimate concern that scammers or hackers may use the various public safety numbers to originate illegal calls or disrupt public safety, which the FCC identified in its prior 2015 Order. However, this concern goes to whether the overall scheme is effective, and should not prevent defining mitigation mechanisms to address erroneous blocking. Thus, the more relevant question is directed to the mitigation aspects, in other words: are the above defined mitigation services subject to abuse?

Exploitation is primarily a concern in acting upon a call originator's request to unblock a number. As noted above, this can be addressed by requiring call originators to first register with a carrier, in order to use an automated interface. The registration process is associated with a "vetting" process to ensure the entity is legitimate and that they warrant their requests pertain to numbers that they are authorized to originate calls from. Call originators may receive and then provide security credentials (login identifier and password). Call originators should be able to then make a request for unblocking and have it acted upon in a timely manner. Presumably, scammers will be hesitant to self-identify by registering and undergo vetting.

G. In this light, we seek comment on call blocking models voice providers or third parties may have developed to address erroneous call blocking.

Each service provider is expected to use a proprietary model for determining which calls to block, and we cannot expect nor mandate disclosure of their model's operational details. It is expected that instances of erroneous blocking will occur and therefore mitigation techniques will be required. A perfect balance, while a desirable goal, is likely something that cannot be achieved.

A fundamental concern is that the overall call blocking scheme based on this technology has the potential to be "gamed" by scammers. We have already observed scammers migrating to neighbor spoofing, and we can expect them to further migrate to using a "one-time" randomly selected neighbor spoofing number where the calling party number is unique for each called number. It is unclear how any analytics program could effectively detect a pattern of illegal or unwanted calls on this basis. Or, scammers may migrate to simply using public safety/government numbers. In this case, even assuming a complete set of call blocking mitigation procedures are in place, provided by all carriers, via automated interfaces, some exploitation appears possible. The result would be that the carriers would then block the number, followed by a request for

unblocking, etc. It is for this reason that Noble Systems believes that the Shaken & Stir technology is a necessary long term solution, regardless of the deployment of analytics-based technology. The Commission not to be sidetracked from the importance of deploying this technology.

IV. REPORTING OBLIGATIONS

Ideally, reported data can be used to identify carriers that are outliers with respect to their blocking performance. This could identify carriers that are "over-blocking" (i.e., aggressively blocking too many legitimate calls) or "under-blocking" (i.e., letting too many illegal calls through). There is a concern by many call originators that carriers may err by over-blocking legitimate and wanted calls. Thus, a purpose of imposing a reporting obligation should be to identify, on a relative basis, those carriers that are over-blocking legal calls.

One metric for measuring over-blocking involves measuring the relative number of requests (either from subscribers or call originators) to alter the blocking status of a number. At a high level, this would be a rough gauge of dissatisfaction. For subscribers (called parties), the metric could be the rate of requests for a number of subscribers over a time period (e.g., X requests/thousand subscribers/quarter). A high number of requests to unblock would be suggestive of over-blocking, while a high number of requests to block would be suggestive of under-blocking. For call originators, a relative number of requests from call originators to alter the blocking status may suggest whether the carrier is over-blocking or not.

In order to have useful data to compare, the values must be normalized. Reporting a number of altered blocking status on an absolute basis is not necessarily helpful in order to compare relative carrier performance. Thus, providing a metric based on the number of requests per a time period for, e.g., every 1000 subscribers, would be more useful.

It should be recognized that call originators whose numbers are spoofed, may result in their calls being blocked, causing them to request status changes of their numbers. Carriers may deny such requests and properly continue to block calls while such spoofing continues. Or, if the number is not being spoofed, the called party may have explicitly requested to block that number. Thus, a call originator may request to altering the blocking of a number, but it may not be granted by the carrier. In this case, the blocking status may not be considered as an error. Even though

the carrier may nevertheless alter a number's status based their algorithm (i.e., the spoofing stops and the algorithm unblocks the number), the change was not a result of an error that was brought to their attention by the call originator. Thus, merely changing the status from blocked to unblocked is not representative of an error.

While the Commission may decide to require carriers report the number of calls that are blocked, it is unclear how this number, by itself, provides any useful context. First of all, an absolute number does not provide any context, since the relative size of the carrier must be taken into account. Further, some carriers providing international gateways are expected to block many more calls, most of which may be illegal calls, and it would be proper to block such calls. Further, it would seem necessary to distinguish between blocking calls with invalid, unallocated, or unassigned NANP numbers from those using allocated, assigned, and valid NANP numbers. It is unlikely that a carrier blocking invalid, unallocated, or unassigned NANP numbers would be "over-blocking" such calls, since each is presumed to be an illegal call.

The Commission should recognize that the existence of an informal complaint process could, by itself, be a measure of relative carrier performance. A carrier that is the target of a large number of complaints from call originators to the Commission may be indicative of over-blocking by that carrier. In summary, the Commission is cautioned against readily defining reporting requirements on carriers until it is clear how and what it will be used.

V. CONSIDERATION OF NETWORK BASED CALL LABELING

The Commission's Order pertains to call blocking, and not call labeling.[9] However, carriers are using the same algorithms as part of the labeling process. The mitigation services identified herein have, in some cases, a parallel application for call labeling. While there is no need to inform a call originator in real-time of the label attached to a call (as with a per-call blocking indication), call originators may need a mechanism to review the label associated with a number and request a change to the label assigned by the carrier. Similarly, called parties may

[9] "Labeling" refers to a carrier's practice of sending text-based information to a device such as a smartphone or caller-id device, contemporaneously with a call, describing an attribute of the call, such as "spam", "telemarketing", "scam likely", etc.

wish to review the labels used on past received calls and request altering those values. This allows either the caller or call originator to correct a mistake in how a call is labeled, similar to correcting a mistake in call blocking.

It is an open issue as to whether, and on what basis, the Commission can regulate carrier-based call labeling. However, there is the potential harm to both called parties and call originators if calls are not accurately labeled. The Commission should monitor such aspects to see if regulation is needed in the future.

VI. CONCLUSION

For the foregoing reasons, the Commission should require carriers offering call blocking also offer mitigation services for both callers and called parties. The mitigation services include:

1. providing information about a blocked call,
2. checking on the current blocking status of a number, and
3. requesting a change to the blocking status of a number.

By taking these reasonable and proportionate steps to mitigate the harm of erroneous call blocking, the Commission will ensure another tool for addressing illegal calls can be accommodated by carriers, their subscribers, and call originators.

Respectfully submitted,

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